

Mars Science Laboratory Entry, Descent and Landing System

In the summer of 2012, the Mars Science Laboratory project will land a spacecraft on the surface of Mars. This craft will be the largest vehicle ever to visit the surface of another planet. The Mars Science Laboratory entry, descent and landing system is the culmination of EDL development over the last five decades and incorporates techniques and designs demonstrated on Viking, Apollo, and MER/MPF as well as striking new ground in touchdown system design. The entry, descent and landing system will use new technologies and demonstrate greater performance in altitude, mass delivery and landing accuracy than any previous Mars mission. This paper will discuss the EDL system design, development challenges and expected Mars performance.